

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 2

**IN THE CLAIMS:**

1. (Original) An electromagnetic wave absorber comprising composite magnetic particles having a grain size smaller than 10 $\mu$ m in which magnetic metal grains and ceramic are unified.
2. (Original) An electromagnetic wave absorber comprising composite magnetic particles in which a plurality of fine magnetic metal grains and ceramic are unified by enclosing said plurality of fine magnetic metal grains with said ceramic.
3. (Original) An electromagnetic wave absorber comprising composite magnetic particles in which magnetic metal grains and a plurality of ceramic grains are unified by embedding the ceramic grains into the magnetic metal grains.
4. (Currently Amended) An electromagnetic wave absorber according to any one of ~~claim~~ claims 1 to ~~claim~~ 3, wherein said magnetic metal is at least one kind of metal or alloy selected from the group consisting of iron, cobalt and nickel, and said ceramic is at least one kind of ceramic selected from the group consisting of oxide, nitride and carbide of iron, aluminum, silicon, titanium, barium, manganese, zinc, magnesium, cobalt and nickel.
5. (Currently Amended) An electromagnetic wave absorber according to any one of ~~claim~~ claims 1 to 3, ~~claim~~ 4, wherein the magnetic metal grain and ceramic

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 3

are unified by bonding the ceramic onto the surface of the composite magnetic particle.

6. (Currently Amended) An electromagnetic wave absorber according to any one of ~~claim~~ claims 1 to 3, ~~claim 4~~, wherein said composite magnetic particles have an average crystal grain size smaller than 50 nm.

7. (Currently Amended) An electromagnetic wave absorber, wherein said composite magnetic particles described in any one of ~~claim~~ claims 1 to 3 ~~claim 4~~ are dispersed in a material having an electric resistivity higher than an electric resistivity of said composite magnetic particles.

8. (Original) An electromagnetic wave absorber according to claim 7, wherein said material having a high electric resistivity is any one of a resin, an insulation polymer paint and a ceramic sintered material.

9. (Original) A method of manufacturing an electromagnetic wave absorber, wherein composite magnetic particles, in which magnetic metal grains and ceramic are unified, are formed through a mechanical alloying method of a magnetic metal powder and a ceramic powder.

10. (Currently Amended) A method of manufacturing an electromagnetic wave absorber, wherein composite magnetic particles, in which magnetic metal

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 4

grains and ceramic are mixed and unified, are formed by a mechanical alloying method of a composite powder containing a magnetic metal powder and a ceramic powder, by using metallic balls or ceramic balls, size of said ~~ball~~ balls being larger than grain size of the metallic powder, a volumetric amount of said balls being larger than a volumetric amount of said composite powder.

11. (Original) A composite member comprising composite magnetic particles in which magnetic metal particles and ceramic are unified.

12. (Currently Amended) ~~A composite member~~ An electromagnetic wave absorber formed by compounding together both composite magnetic particles, in which magnetic metal grains and ceramics are unified, and a material having an electric resistivity higher than an electric resistivity of the composite magnetic ~~particles. particle.~~

13. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber formed by compounding composite magnetic particles, in which magnetic metal grains and ceramics are unified, and at least one kind of material selected from the group consisting of a resin having an electric resistivity higher than an electric resistivity of the composite magnetic particle, alumina and silica.

14. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 1 to 3, ~~to 4~~, 12 and 13, wherein a volume

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 5

ratio of said ceramic to the composite magnetic particle is 10 to 75 %, and said ceramic is embedded in said magnetic metal grains.

15. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 1 to 3, ~~to 4~~, 12 and 13, wherein an average crystal grain size of said composite magnetic particle is smaller than 50 nm.

16. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 1 to 3, ~~to 4~~, 12 and 13, wherein the surface of said composite magnetic particle is coated with a material having an electric resistivity higher than an electric resistivity of said composite magnetic particle.

17. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 1 to 3, ~~to 4~~, 12 and 13, wherein said composite magnetic particle has an aspect ratio larger than 2, and has an oblate shape.

18. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 1 to 3, ~~to 4~~, 12 and 13, wherein said composite magnetic particles are uniformly dispersed in said material having the high electric resistivity.

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 6

19. (Currently Amended) ~~A electromagnetic wave absorber according to any one of claims 1 to 4, 12 and 13,~~ An electromagnetic wave absorber comprising composite magnetic particles having a grain size smaller than 10 $\mu$ m in which magnetic metal grains and ceramic are unified,

wherein said composite magnetic particles are substantially oblate composite magnetic particles and are substantially oriented in one direction in said material having the a high electric resistivity.

20. (Currently Amended) ~~A electromagnetic~~ An electromagnetic wave absorber according to any one of claims 12 and 13, wherein said material having the high electric resistivity is a polymer material or a ceramic sintered material.

21.-37. (Canceled)

38. (New) An electromagnetic wave absorber comprising composite magnetic particles in which a plurality of fine magnetic metal grains and ceramic are unified by enclosing said plurality of fine magnetic metal grains with said ceramic,

wherein said composite magnetic particles are substantially oblate composite magnetic particles and are substantially oriented in one direction in said material having a high electric resistivity.

FUJIEDA *et al.*, SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 7

39. (New) An electromagnetic wave absorber comprising composite magnetic particles in which magnetic metal grains and a plurality of ceramic grains are unified by embedding the ceramic grains into the magnetic metal grains,

wherein said composite magnetic particles are substantially oblate composite magnetic particles and are substantially oriented in one direction in said material having a high electric resistivity.

40. (New) An electromagnetic wave absorber formed by compounding together both composite magnetic particles, in which magnetic metal grains and ceramics are unified, and a material having an electric resistivity higher than an electric resistivity of the composite magnetic particles,

wherein said composite magnetic particles are substantially oblate composite magnetic particles and are substantially oriented in one direction in said material having a high electric resistivity.

41. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein said magnetic metal is at least one kind of metal or alloy selected from the group consisting of iron, cobalt and nickel, and said ceramic is at least one kind of ceramic selected from the group consisting of oxide, nitride and carbide of iron, aluminum, silicon, titanium, barium, manganese, zinc, magnesium, cobalt and nickel.

FUJIEDA et al., SN 09/828,150  
Amdt. dated 17 June 2004  
Reply to OA mailed 17 February 2004

Dkt. 503.39984X00/P5945/RH  
Page 8

42. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein a volume ratio of said ceramic to the composite magnetic particle is 10 to 75 %, and said ceramic is embedded in said magnetic metal grains.

43. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein an average crystal grain size of said composite magnetic particle is smaller than 50 nm.

44. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein the surface of said composite magnetic particle is coated with a material having an electric resistivity higher than an electric resistivity of said composite magnetic particle.

45. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein said composite magnetic particle has an aspect ratio larger than 2, and has an oblate shape.

46. (New) An electromagnetic wave absorber according to any one of claims 19 and 38 to 40, wherein said composite magnetic particles are uniformly dispersed in said material having the high electric resistivity.